

Nagoya University Chemistry & Biotechnology Department
Materials Chemistry Division
Postdoctoral Researcher Recruitment

Number of recruits: 1

Institution: Materials Chemistry Division, Chemistry & Biotechnology Department, Nagoya University

About the lab: The research of our lab aims at the development of novel functioning materials. My research group performs research on molecular systems including biological substances and polymer materials using molecular dynamics (MD). The commonly observed phenomena occur because of the aggregation of molecules. Thus, analysis at the molecular level is necessary for the understanding of these phenomena. MD simulations mimic the realistic systems and serve as a powerful tool for this purpose. We utilize MD calculations and supercomputer resources including Fugaku and take continuous effort on the investigation of various phenomena of protein, virus, and polymer materials. For the completion of projects, we perform research also including methodology and software developments.

Lab HP: http://www.chembio.nagoya-u.ac.jp/labhp/solid2/OhtsukiLabMember_e.html

Group HP: <https://theory-comput-chem.jp/home-en/>

Project details : We perform research by using molecular dynamic (MD) simulations under the project “The design of recyclable polymeric materials with mechanical stability and selective degradability” of the Strategic Basic Research Programs (CREST). This project aims at the development of microparticle materials which have programmed degradation selectivity and retain high mechanical stability. Serving this goal, our group tries to understand the molecular origins of the stability and degradation/deterioration of polymeric microparticle materials via the investigation of the structural hierarchy from single microparticles to the collections of them, using computational chemistry methods. These discoveries will be pieced together with the findings from the other groups in the project to construct the fine material science that enables the resource recycling of the polymeric microparticle materials.

CREST Project HP: https://www.jst.go.jp/kisoken/crest/en/project/1111113/1111113_2021.html

Major and division : Molecular dynamic simulation. No matter what the past research interest was. Interest in molecular simulation of polymer is required. Programming skill is highly recommended.

Required degree level : Ph.D. or equivalent degrees, or anticipated acquisition

Starting date : As soon as possible. If the candidate is obliged to a current project or is anticipated to acquire the doctoral degree, the starting date can be negotiated.

Contract length: Annual renewal up to five years.

Language requirement: English or Japanese

Salary: Annually 4.2 to 5.5 million Yen before tax. Based on experience and age, according to the salary standard of formal or part time employee based on the employment type.

Documents required : Please submit the documents listed below by email.

Please clearly mark "Application documents" in the subject of the email.

1. CV (Free format, with a 4 cm x 3 cm photo attached)

2. A list of research achievements

3. No more than 3 major papers

4. Research summary (Within 1 page of A4)

※Please show case any programming contribution to the past research no matter if the involved program is published or not.

5. One recommendation letter, or the contact of any referrer.

A notification of receipt will be sent within 3 workdays. Please send an inquiry if the notification is not received. The recruitment documents will be used only for the purpose of recruitment and will be properly disposed afterwards.

Deadline : February 28th (Monday). However, the recruitment will be ended if any eligible candidate passes the interview.

Selection method : The eligible candidates will be interviewed. The position will be held if there are no eligible candidates.

Contact: FUJIMOTO, Kazushi (Assistant professor)

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FUJIMOTO, Kazushi

Functional material chemistry group

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